

Solve the system

$$\textcircled{a} \begin{cases} y = 2x + 3 \\ y = 3x - 2 \end{cases}$$

$$\textcircled{b} \begin{cases} 3x + 7y = 15 \\ 5x + 2y = -4 \end{cases}$$

$$\textcircled{c} \begin{cases} -2x + 4y = 6 \\ -3x + 6y = 8 \end{cases}$$

$$\textcircled{d} \begin{cases} 4x + 2y = 8 \\ y = 2x + 1 \end{cases}$$

①

$$y = 2x + 3$$

$$y = 3x - 2$$

$$3x - 2 = 2x + 3$$

$$3x = 2x + 5$$

$$x = 5$$

$$y = 2(5) + 3$$

$$y = 13$$

$$\textcircled{6} \begin{cases} (3x + 7y = 15)^5 \\ (5x + 2y = -4)^3 \end{cases}$$

$$\begin{array}{r} 15x + 35y = 75 \\ - 15x + 6y = -12 \\ \hline \end{array}$$

$$\frac{29y}{29} = \frac{87}{29}$$

$$\boxed{y = 3}$$

$$\begin{aligned} 3x + 7(3) &= 15 \\ 3x + 21 &= 15 \\ - 21 &- 21 \end{aligned}$$

$$\frac{3x}{3} = \frac{-6}{3}$$

$$\boxed{x = -2}$$

$$\textcircled{C} \begin{aligned} -2x + 4y &= 6 \times -6 \\ -3x + 6y &= 8 \times 4 \end{aligned}$$

$$\begin{aligned} 12x - 24y &= -36 \\ -12x + 24y &= 32 \\ \hline 0 &= -4 \end{aligned}$$

No solution, Parallel, Inconsistent

$$\textcircled{1} \quad 4x + 2y = 8$$

$$y = 2x + 1$$

$$4x + 2(2x + 1) = 8$$

$$4x + 4x + 2$$

$$8x + 2 = 8$$

$$\begin{array}{r} 8x = 6 \\ 8 \end{array}$$

$$x = .75$$

$$y = 2(.75) + 1$$

$$1.5 + 1$$

$$\boxed{y = 2.5}$$

Calories

$g = \text{graham crackers}$

$y = \text{yogurt}$

$$700 > 60g + 130y \quad \rightarrow \quad \frac{(700 - 60x)}{130} > y$$

Fat

$$20 \geq 2g + 2y \quad \frac{(20 - 2x)}{2} \geq y$$

Protein

$$17 \leq 2g + 2y \quad \frac{(17 - 2x)}{2} \leq y$$

Iron

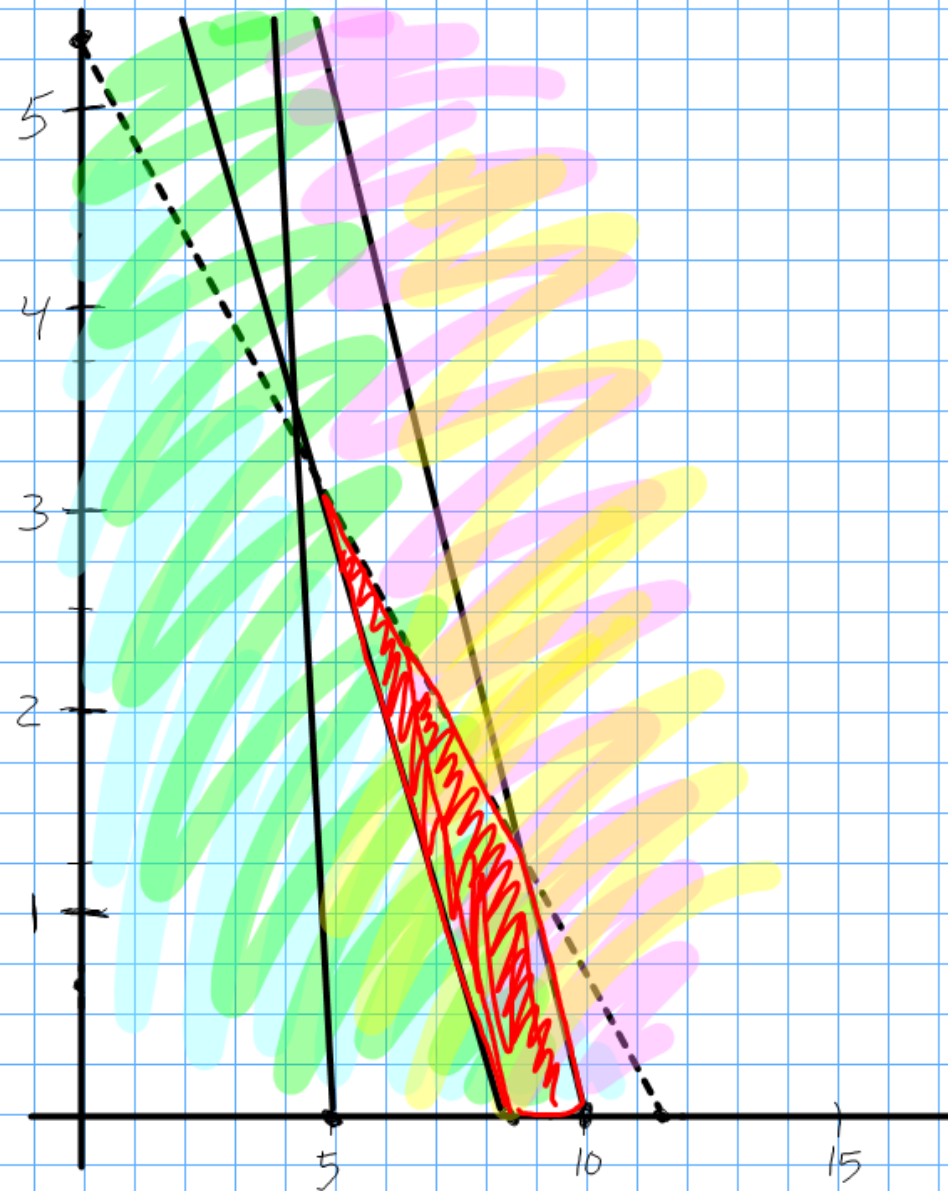
$$0.3 \leq 0.06g + 0.01y \quad \frac{(0.3 - 0.06x)}{0.01} \leq y$$

$$700 > 60x + 130y$$

$$20 \geq 2x + 2y$$

$$17 \leq 2x + 2y$$

$$0.3 \leq 0.06x + 0.01y$$



HW

Spend 20-30 min this weekend
to study Sect. 3.1-3.4